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Dominant Color Extraction And Theming

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DOMINANT COLOR EXTRACTION AND THEMING

ABSTRACT

A system and method for setting themes automatically on computing devices having backlit LED surfaces is disclosed. The system extracts the main or dominant color palette out of the wallpaper that the user sets and uses that palette to lightly customize system UI. The system thus automatically selects the theme to match the user's choice and applies this to various system interfaces such as menus, applications or other operating system screens. For devices with keyboards that have LED backlight and devices that have a touch keyboard, the method envisages use of multi-colored LEDs. The system would adjust colors of the LEDs based on the extracted color palette to harmonize the user's wallpaper choice, system UI, and the hardware, to provide the feel like they are meant to work together.

BACKGROUND

Many parts of an operating system look separate and individually designed. There often is no consistent element tying the entire system together. When there is, it enforces a strong visual language for the OS but the user's preferences such as their wallpaper choice are limited to some surfaces and not the whole. They also can clash with the color and visual scheme of other parts of the OS. For example, a red wallpaper clashes with the predominantly blue and whitish tones of an OS. Taking that one step further, the industrial design and hardware identity clashes with the OS user interface often as well, especially as the OS evolves over time and users customize certain aspects.

DESCRIPTION

A system and method for setting themes automatically on computing devices having backlit LED surfaces is disclosed. The method, as disclosed in FIG. 1, extracts the main or

dominant color palette out of the wallpaper that the user sets and uses that palette to lightly customize system UI throughout the system. Typical wallpaper setting of a user is shown in FIG. 2 along with the color extraction scheme based on a user's wallpaper. The extracting involves extracting colors according to FIG. 2 and keeping the DM shade. In the next step, the DM color is applied as the first layer of the shelf at 100%. Another #000 layer is added at 60% and the group is made 80%.

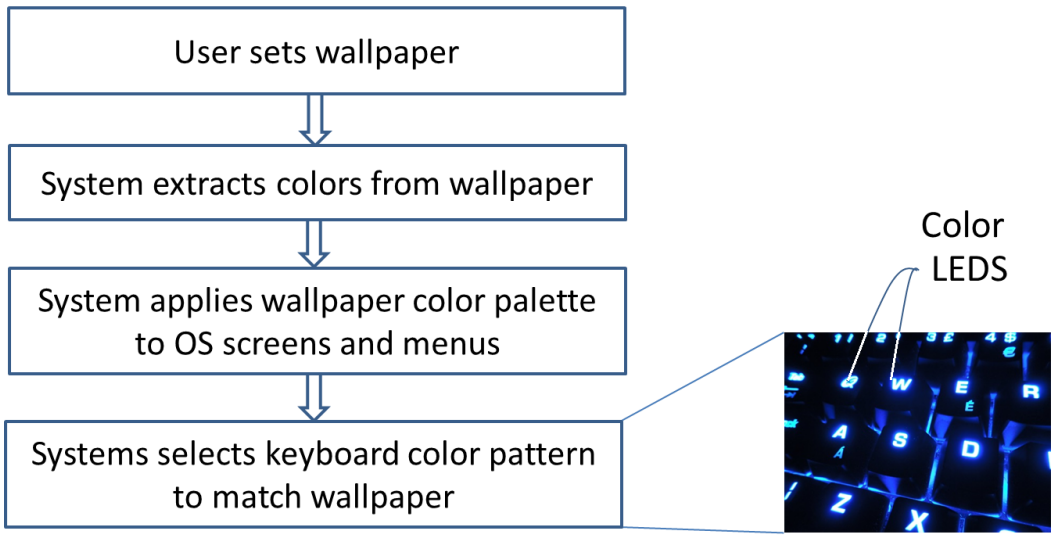

FIG. 1: Method of dominant color extraction and theming

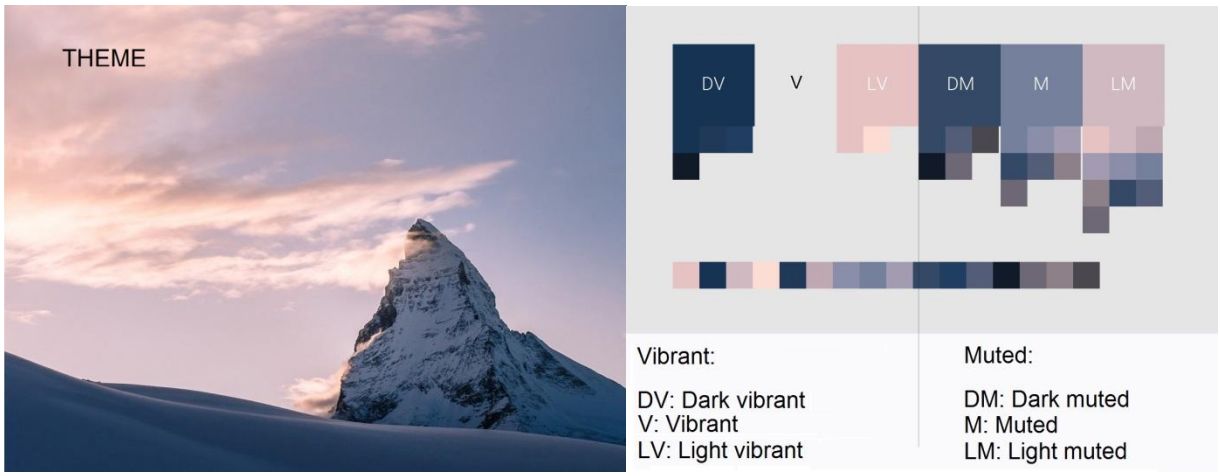

FIG. 2: Wallpaper setting and color theme extraction

The color palette customization may extend to various system interfaces such as menus, applications or other operating system screens, as illustrated in FIG. 3. The system thus automatically selects the theme to match the user's choice without requiring them to sift through available themes.

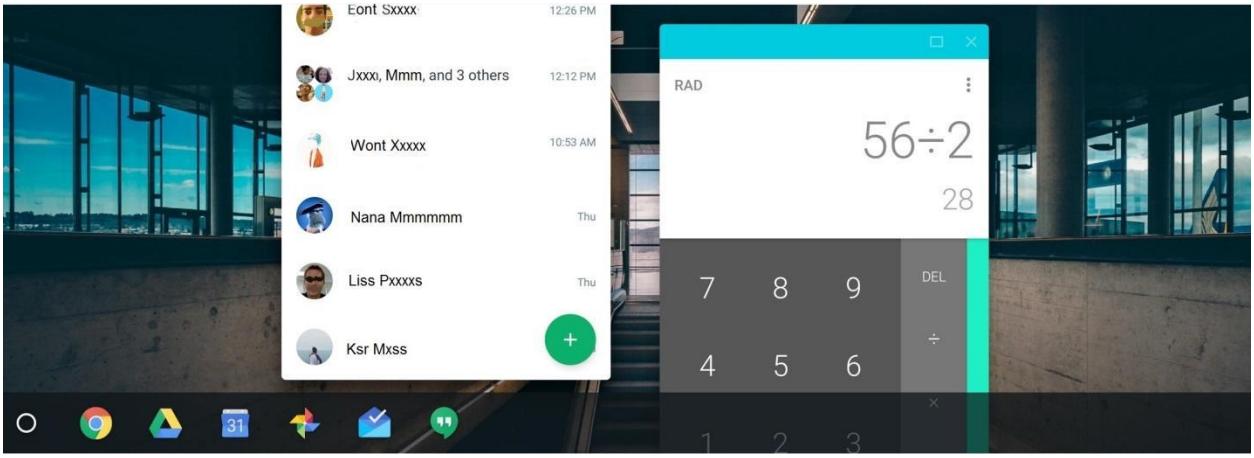

FIG. 3: Example color scheme applied using color extraction and theming

For devices with keyboards that have LED backlight and devices that have a touch keyboard, the method envisages use of multi-colored LEDs instead of simple white LEDs. The system would adjust colors of the LEDs based on the extracted color palette to harmonize the user's wallpaper choice, system UI, and the hardware, to provide the feel like they are meant to work together. As the user chooses a different wallpaper, the system adjusts the LEDs to match. In a multi-user environment, the system could also be configured to adapt or adjust between users who use different wallpapers.